

# *Io* B. NORD. (Compositae-Senecioneae), a new monotypic genus from Madagascar

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## Abstract

The new monotypic genus *Io* B. NORD. is described, based on *Senecio ambondrombeensis* H. HUMB. from Madagascar. The single known species is *Io ambondrombeensis* (H. HUMB.) B. NORD., comb. nov. The new genus is readily distinguished from *Senecio* by the opposite leaves, a rather unusual feature in the tribe. Furthermore, the style branches of disc-florets have continuous stigmatic areas inside and papillate outsides, and their tips are truncate and lack distinct sweeping-hairs. Some New World genera such as *Cabrieriella*, *Herodotia*, *Ekmaniopappus* and *Gynoxys* have the opposite leaves in common with the new genus, but are not believed to be closely related.

## Introduction

*Senecio ambondrombeensis* H. HUMB. was described from a single locality in the Ambondrombe mountains in south-east central Madagascar (HUMBERT 1948). In the 'Flore de Madagascar' HUMBERT (1963) placed this singular species in a group of its own within *Senecio* (viz., Group VIII, without a formal name) on account of the opposite leaves, a feature otherwise unknown in this very large genus. Altogether three collections were cited, and no later records are known to me. Material in K, P and TAN has been studied (cf. Acknowledgements).

## Description and Discussion

*Io* B. NORD., gen. nov., a *Senecionis* speciebus omnino foliis oppositis decussati differt.

Suffrutex erectus glaber c. 0.5 m altus. Folia opposita decussata subsessilia ovato-lanceolata herbacea plana integra 2–3.5 cm longa et 1–2 cm lata pinnativenosa acuminata margine denticulato-mucronata. Capitula corymbosa heterogama radiata calyculata. Flores radii 8–11 feminei flavi. Flores disci numerosi flavi, styli rami intus

area stigmatica continua instructi apice truncati papillati. Cypselae glabrae, pappi setae numerosae albae minutissime barbellatae persistentes.

Typus: *Senecio ambondrombeensis* H. HUMBERT.

Genus monotypica:

*Io ambondrombeensis* (H. HUMBERT) B. NORD., comb. nov.

Basionym: *Senecio ambondrombeensis* H. HUMBERT, Not. Syst. Paris 13(4): 332 (1948); HUMBERT, Fl. Madasc. 3 Composées: 743-744 (1963).

Type: BOITEAU in Herb. Jard. Bot. Tananarive 4596 (Plecto!, K iso!, TAN iso!, scanned image seen).

Illustr.: Fig. nostra 1; HUMBERT (1963) Fig. CXXVII: 3.

Erect almost glabrous suffrutex ca. 0.5 m high. Leaves opposite, decussate (internodes 2–4 cm), sessile, ovate-lanceolate with slightly cordate base, 2–3.5 cm long and 1–2 cm wide, entire, herbaceous, pinnateveined, acuminate; margins sparsely denticulate-mucronate; petiole up to 3 mm long, basally widened and half-clasping, somewhat villous. Capitula corymbose on branching bracteate peduncles 2–5 cm long from the uppermost leaf-pair, heterogamous, radiate. Involucral bracts 11–13, linear-lanceolate, 7 mm long and 1–2 mm wide, glabrous, acuminate; calyculus bracts several, linear-lanceolate, acuminate. Ray-florets 8–11, female, yellow; tube cylindrical, 1.5–2 mm long, basally swollen, glabrous; lamina narrowly oblong, 10–12 mm long, 4-veined. Disc-florets numerous, hermaphrodite, yellow; corolla shortly tubular below, tube 1.5 mm long, limb narrowly campanulate, 3 mm long, 5-lobed; lobes triangular-ovate, with median resin duct and marginal veins. Anthers 1.3–1.8 mm long, basally sagittate to shortly caudate; apical appendage small, ovate-oblong, obtuse; filament collar distinctly balusterform. Style branches narrowly oblong, ca. 1 mm long, dorsally papillate with elongate truncate-obtuse papillae, inside with continuous stigmatic area extending a little to the dorsal side, apically truncate with very short papillae and without sweeping-hairs. Cypselas cylindrical-oblong, glabrous; pappus bristles numerous, uniseriate, 3–4 mm long, erect, slender, very minutely barbellate, white, persistent.

Flowering period: April.

Vernacular names (fide coll.): antsoimbaraka, ahipotsy.

Collections: Madagascar: Centre (Sud-Est), sommet de l'Ambondrombe, 1900 m, 11.IV. 1941, BOITEAU in Herb. Jard. Bot. Tananarive 4596 (K! P! TAN! scanned image); BOITEAU in Herb. Jard. Bot. Tananarive 4636 (TAN! scanned image, coll. no. lacking but no doubt identical to the second BOITEAU specimen cited by HUMBERT 1948, 1963);

sommet de l'Ambondrombe (S.-E du Betsileo), HEIM s.n. (P? n.v., but cited by HUMBERT 1963).

**Etymology:** A generic name as short as possible is proposed to compensate for the long and cumbersome specific epithet. In Latin *Io* is an exclamation of joy, and in Greek mythology *Io* was a maiden loved by Zeus. *Io* is also a small part of the generic name *Senecio*. It is also the name of the innermost moon of the large planet Jupiter, which is surrounded by numerous satellites, like the large genus *Senecio* is surrounded by numerous small satellite genera.

*Io* is only known from the Ambondrombe mountains, where it grows on siliceous rocks at 1700 to 1900 m altitude. In my provisional key to the 138 genera of the tribe Senecioneae this new genus will come out together with *Cabrieriella* CUATREC., a South American genus with two species. They are scandent shrublets with some similarities to *Io*, especially in leaf shape and arrangement. However, a close relationship between these genera is not suggested. Few and mostly New World genera of the tribe have opposite leaves. Like *Cabrieriella* they are scandent shrubs, viz. *Scrobicaria*, *Herodotia* and *Ekmaniopappus*, or erect shrubs or small trees in the large Andean genus *Gynoxys*. None of these is proposed to be closely related to the new Malagasy genus, which seems to hold a rather isolated position in the tribe.

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### References

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